

**AMENDMENTS TO THE SPECIFICATION:**

Please insert a new paragraph 0025A following the heading, “**BRIEF DESCRIPTION OF THE DRAWINGS**,” as follows:

[0025A] The patent or application file contains at least one drawing executed in color.  
Copies of this patent or patent application publication with color drawing(s) will be provided by the Office upon request and payment of the necessary fee.

Please replace paragraph 0026 with the following:

[0026] Figures 1A and 1B illustrate a schematic of a non-convergent visual system.

Please replace paragraphs 0035 and 0036 with the following:

[0035] Figures 10A, B, C, and D illustrates cup/disc ratios versus year of study for patient one.

[0036] Figures 11A, B, C, and D illustrates a longitudinal study of cup/disc ratios for ~~three patients~~ patient two and Figures 11E, F, G, and H illustrate a longitudinal study of cup/disc ratios for patient three.

Please replace paragraphs 0075 and 0076 with the following:

[0075] Results from clinical and computer generated measures for one patient over ten years are shown in plots of Figures 10A, B, C, and D, suggesting good correlation for the new volume measures from clinical and computer generated cup/disc contours.

Specifically, Figure 10A illustrates a cup/disc area ratio for a patient 1 over the years 1989 through 1999 using both measured data (data points indicated by circles) and computer-generated data (data points indicated by squares). Figure 10B illustrates a cup/disc volume ratio for a patient 1 over the years 1989 through 1999 using both measured data (data points indicated by circles) and computer-generated data (data points indicated by squares). Figure 10C illustrates a cup/disc horizontal length ratio for a patient 1 over the years 1989 through 1999 using both measured data (data points indicated by circles) and computer-generated data (data points indicated by squares).

Figure 10D illustrates a cup/disc vertical length ratio for a patient 1 over the years 1989 through 1999 using both measured data (data points indicated by circles) and computer-generated data (data points indicated by squares). Cup/dice ratios versus year of study for patient one. Plot through crosses shows the computer generated ratios. Plot passing through dots represent the ophthalmologist manual segmentation. A) shows area ratio, B) shows volume ratio, C) shows maximum horizontal length ratio and D) shows maximum vertical length ratio.

[0076] Figures 11A, B, C, D, E, F, G and H shows illustrate clinical and computer generated measures a comparison of these measures for six two additional patients.  
Cup/dice ratios versus year of study for three patients including patient one are plotted. Specifically, Figure 11A illustrates a cup/disc vertical length ratio for a patient 2 over the years 1989 through 1999 using both measured data (data points indicated by circles) and computer-generated data (data points indicated by squares). Figure 11B illustrates a cup/disc horizontal length ratio for a patient 2 over the years 1989 through 1999 using both measured data (data points indicated by circles) and computer-generated

data (data points indicated by squares). Figure 11C illustrates a cup/disc area ratio for a patient 2 over the years 1989 through 1999 using both measured data (data points indicated by circles) and computer-generated data (data points indicated by squares).

Figure 11D illustrates a cup/disc volume ratio for a patient 2 over the years 1989 through 1999 using both measured data (data points indicated by circles) and computer-generated data (data points indicated by squares).

Figure 11E illustrates a cup/disc vertical length ratio for a patient 3 over the years 1989 through 1999 using both measured data (data points indicated by circles) and computer-generated data (data points indicated by squares).

Figure 11F illustrates a cup/disc horizontal length ratio for a patient 3 over the years 1989 through 1999 using both measured data (data points indicated by circles) and computer-generated data (data points indicated by squares).

Figure 11G illustrates a cup/disc area ratio for a patient 3 over the years 1989 through 1999 using both measured data (data points indicated by circles) and computer-generated data (data points indicated by squares).

Figure 11H illustrates a cup/disc volume ratio for a patient 3 over the years 1989 through 1999 using both measured data (data points indicated by circles) and computer-generated data (data points indicated by squares).

~~First column (from left to right) represents maximum vertical length ratio, second column is maximum horizontal length ratio, third column is area ratio and fourth is volume ratio. First row of images represent analysis for patient one, second row for patient two and third row for patient three.~~

**Amendments to the Drawings:**

Figure 1 has been enlarged and incorporated into Figures 1A and 1B. Figure 10 has been replaced with Figures 10A, B, C, D. Figure 11 has been replaced with Figures 11A, B, C, D, E, F, G, and H. The graphs illustrated in the figures as originally filed have been resized and placed on individual sheets. Color has been removed. A legend has been added to distinguish data points in the figures.

A Petition To Submit Drawings In Color has been filed with these Amendments. Three sets of replacement drawings accompany that petition.